

#### AMENDMENT TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the application.

#### LISTING OF CLAIMS

Claims 1 to 11: (Canceled).

Claim 12 (Amended): A method for producing a multi-layered coiled hollow fiber bundle, the method comprising the steps of:

- (a) coiling a hollow fiber around a mandrel to form a first layer thereon, and
- (b) coiling said hollow fiber around said mandrel over said first layer to form a second layer thereon; and

wherein the coiling in step (a), the coiling in step (b), and the hollow fiber satisfy predetermined variables, such that when fluid flows through said hollow fiber at a predetermined velocity, Dean Vortices are generated in the hollow fiber in both said first and second layers, and both said first and second layers perform substantially equivalently along [[a]] at least one predetermined performance parameter; and

wherein said predetermined variables comprise the outer and inner diameter of said hollow fiber, the length of said hollow fiber, and the angle of winding said hollow fiber in both steps (a) and (b).

Claims 13 to 25: (Canceled).

Claim 26 (New): The method of claim 12, wherein said inner diameter of said hollow fiber is in the range of about 1.0 mm to about 2.0 mm, said outer diameter of said hollow fiber is in the range of about 0.3 mm to about 6.0 mm; and the length of said hollow fiber is between about 635 mm and about 2540 mm.

Claim 27 (New): The method of claim 26, wherein said mandrel has a diameter of between about 3.2 mm and about 13 mm.

Claim 28 (New): The method of claim 27, wherein the angle of winding said hollow fiber in both step (a) and step (b) is between about 30 and about 89 degrees.